

**REMARKS**

Claims 1-43 are pending in the application.

Claims 1, 2, 8-10, 12-15, 17, 18, 24, 25, 27-29, 31, 32, 38, 39, 41 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by International Publication No. WO 99/08206 to Sinander, hereinafter "Sinander". Claims 1, 17 and 31 are independent. Applicants respectfully traverse this rejection.

Claim 1 provides a method for supporting versioning of data. The method includes the steps of 1) associating version numbers, each having a different value, with a data item, 2) storing a most recent version of the data item in a first table, 3) storing a version of the data item other than the most recent version in a second table, and 4) determining the version of a stored data item based on the version number and a storage location of the stored data item.

Sinander discloses a method for upgrading databases using a table for storing data and a stored procedure for processing data stored in said table (page 2, lines 28-32). The method upgrades a database "by replacing an old version with a new version of a component of the database providing database functionality" (page 3, lines 16-19). The components are stored procedures, trigger, indexes or tables (page 4, lines 1-2). The steps include 1) creating a new table, 2) copying data from the table to the new table, 3) adding a new version of the stored procedure to the database, and 4) adding an additional stored procedure to the database (page 2, line 33 – page 3, line 7).

Sinander discloses a method of updating a database that uses versions of database **components that provide database functionality**, such as stored procedures, trigger, indexes or tables. However, Sinander does not disclose using versions of a **data item**, or data that is stored in a database and accessed by users of the database.

The term “data item”, as used in the present application, and as is generally understood in the art of data management systems, refers to data that is stored and accessed by users of the database. “Data item” **does not** refer to components that provide database functionality. For example, page 1 of the specification defines the term “data item”: “A library server and one or more object servers may be used to store and access thousands of data items, including, for example, documents, graphics files, sound files, or other objects that are created, edited, approved, and viewed by a number of the system users (page 1, lines 22-24).” Components providing database functionality, as disclosed in Sinander, enable the database system to manage data items that are stored and accessed by users, but are not themselves “data items”.

In contrast, Sinander clearly refers **only** to versioning of components providing database functionality. These components, disclosed in Sinander as stored procedures, trigger, indexes or tables, are examples of “database definition objects” (DDO), and are created as part of the infrastructure of the database.

Further, Sinander clearly distinguishes between components providing database functionality and stored data items. For example, Sinander separately describes functionality as distinct from the stored data: “Relational databases are used to handle the storage and retrieval of data . . . When new **functionality** shall be added to a database, i.e. when the database is upgraded, the format in which the **data** is stored very often has to be changed as well” (page 1, lines 10-16). Thus, Sinander distinguishes functionality of a database from data that is stored and retrieved in the database. Thus, components that provide functionality to the database are clearly understood to be different than data that is stored in and retrieved from the database.

Thus, versioning of “data items”, as provided in claim 1, has no relation to the trivial function of a database upgrade as disclosed in Sinander. The method of claim 1, allows customers to store and modify content, i.e., data items, while retaining previous versions, and perform operations on multiple versions of content. Sinander does not

disclose or suggest this capability.

Thus, as used in the present application and generally understood in the art, the term “data item” refers to data that is maintained and stored in a database for access by various users of the database. In contrast, the “database components” referred to in Sinander are responsible for database functionality and therefore are not understood to refer to data items, which are maintained in the database, stored, and accessed by various users.

Therefore, Sinander fails to disclose the use of versions of a **data item**. Thus, Sinander does not disclose a method for supporting versioning of data that includes “associating version numbers, each having a different value, with a data item; storing a most recent version of said data item in a first table; storing a version of said data item other than said most recent version in a second table; and determining the version of a stored data item based on said version number and a storage location of said stored data item,” as recited in claim 1.

Thus, Sinander fails to disclose or suggest the elements of claim 1. Therefore, claim 1 is patentable over Sinander.

Claims 2, 8-10 and 12-15 depend from claim 1. For at least reasoning provided in support of claim 1, claims 2, 8-10 and 12-15 are also patentable over Sinander.

Independent claims 17 and 31 include recitals similar to claim 1. Therefore, for at least reasoning similar to that provided in support of claim 1, claims 17 and 31 are patentable over Sinander.

Claims 18, 24, 25 and 27-29 depend from claim 17. Claims 32, 38, 39, 41 and 42 depend from claim 31. For at least reasoning similar to that provided in support of claims 17 and 31, claims 18, 24, 25 and 27-29, 32, 38, 39, 41 and 42 are also patentable over Sinander.

For the reasons set forth above, the rejection of claims 1, 2, 8-10, 12-15, 17, 18, 24, 25, 27-29, 31, 32, 38, 39, 41 and 42 under 35 U.S.C. 102(b) as anticipated by Sinander is overcome. Applicants respectfully request that the rejection of claims 1, 2, 8-10, 12-15, 17, 18, 24, 25, 27-29, 31, 32, 38, 39, 41 and 42 be reconsidered and withdrawn.

Claims 3-6, 19-22 and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinander in view of U.S. Patent No. 5,410,695 to Frey et al., hereinafter "Frey". Applicants respectfully traverse this rejection.

As described above in the discussions of independent claims 1, 17 and 31, Sinander fails to disclose the use of versions of a **data item**. Thus, Sinander does not disclose a method for supporting versioning of data that includes "associating version numbers, each having a different value, with a data item; storing a most recent version of said data item in a first table; storing a version of said data item other than said most recent version in a second table; and determining the version of a stored data item based on said version number and a storage location of said stored data item," as recited in claim 1.

Frey discloses a system in which individual data entries are placed in a shared data processor and applications sharing access to the data are presented with various techniques for accessing the data independent of the physical location of the data within the processor, but rather represent attributes of the data entries (col. 3, lines 9-19).

However, Frey does not disclose a method for supporting versioning of data including "associating version numbers, each having a different value, with a data item; storing a most recent version of said data item in a first table; storing a version of said data item other than said most recent version in a second table; and determining the version of a stored data item based on said version number and a storage location of said stored data item," as recited in claim 1.

Neither Sinander nor Frey disclose a method for supporting versioning of “data items” as provided in claim 1. Thus, Sinander and Frey, whether considered independently or in combination with one another, fail to disclose all of the elements of claim 1. Therefore, claim 1 is patentable over the cited combination of Sinander and Frey.

Claims 3-6 depend from claim 1. For at least reasoning similar to that provided in support of claim 1, claims 3-6 are patentable over the cited combination of Sinander and Frey.

Independent claims 17 and 31 include recitals similar to claim 1. Therefore, for at least reasoning similar to that provided in support of claim 1, claims 17 and 31 are patentable over the cited combination of Sinander and Frey.

Claims 19-22 depend from claim 17. Claims 33-36 depend from claim 31. For at least reasoning similar to that provided in support of claims 17 and 31, claims 19-22 and 33-36 are patentable over the cited combination of Sinander and Frey.

For the reasons set forth above, the rejection of claims 3-6, 19-22 and 33-36 as unpatentable over Sinander in view of Frey is overcome. Applicants respectfully request that the rejection of claims 3-6, 19-22 and 33-36 be reconsidered and withdrawn.

Claims 7, 23 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinander in view of Frey, and further in view of U.S. Patent No. 6,591,342 to Akkary et al., hereinafter “Akkary”. Applicants respectfully traverse this rejection.

As described above in the discussions of independent claims 1, 17 and 31, Sinander and Frey, whether considered independently or in combination with one another, fail to disclose all of the elements of any of claims 1, 17 and 31.

Akkary discloses a method for executing instructions that includes receiving a store instruction and inserting the instruction into a queue (col. 2, lines 24-28). The method also includes issuing and removing a store instruction from a queue to a memory (col. 2, lines 29-31). A memory disambiguation apparatus includes a queue configured to hold all of the store instructions that are in an instruction window (col. 2, lines 45-47).

However, Akkary does not disclose a method for supporting versioning of data including "associating version numbers, each having a different value, with a data item; storing a most recent version of said data item in a first table; storing a version of said data item other than said most recent version in a second table; and determining the version of a stored data item based on said version number and a storage location of said stored data item," as recited in claim 1.

Neither Sinander, Frey nor Akkary disclose a method for supporting versioning of "data items" as provided in claim 1. Thus, Sinander, Frey and Akkary, whether considered independently or in combination with one another, fail to disclose all of the elements of claim 1. Therefore, claim 1 is patentable over the cited combination of Sinander, Frey and Akkary.

Claim 7 depends from claim 1. For at least reasoning similar to that provided in support of claim 1, claim 7 is patentable over the cited combination of Sinander, Frey and Akkary.

Independent claims 17 and 31 include recitals similar to claim 1. Therefore, for at least reasoning similar to that provided in support of claim 1, claims 17 and 31 are patentable over the cited combination of Sinander, Frey and Akkary.

Claim 23 depends from claim 17. Claim 37 depends from claim 31. For at least reasoning similar to that provided in support of claims 17 and 31, claims 23 and 37 are

patentable over the cited combination of Sinander, Frey and Akkary.

For the reasons set forth above, the rejection of claims 7, 23 and 37 as unpatentable over Sinander in view of Frey and further in view of Akkary is overcome. Applicants respectfully request that the rejection of claims 7, 23 and 37 be reconsidered and withdrawn.

Claims 11, 26 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinander in view of U.S. Publication No. 2002/0103815 to Duvillier et al., hereinafter "Duvillier". Applicants respectfully traverse this rejection.

As described above in the discussions of independent claims 1, 17 and 31, Sinander fails to disclose or suggest the elements of any of claims 1, 17 and 31.

Duvillier discloses a method and computer program for performing a data modifying transaction of a data object to a database (par. 16). An entry for a data object containing version data for the data object is created and maintained in an object table (par. 16). If the entry represents multiple versions of the data object, a version collection procedure is triggered in which an oldest version of the data object is selected and it is determined whether it is non-collectable (par. 17). If it is determined that the oldest version is non-collectable, that version is deleted (par. 17).

However, Duvillier does not disclose a method including "associating version numbers, each having a different value, with a data item; storing a most recent version of said data item in a first table; storing a version of said data item other than said most recent version in a second table; and determining the version of a stored data item based on said version number and a storage location of said stored data item," as recited in claim 1.

Thus, Sinander and Duvillier, whether considered independently or in combination with one another, fail to disclose all of the elements of claim 1. Therefore,

claim 1 is patentable over the cited combination of Sinander and Duvillier.

Neither Sinander nor Duvillier disclose a method for supporting versioning of "data items" as provided in claim 1. Thus, Sinander and Duvillier, whether considered independently or in combination with one another, fail to disclose all of the elements of claim 1. Therefore, claim 1 is patentable over the cited combination of Sinander and Duvillier.

Claim 11 depends from claim 1. For at least reasoning similar to that provided in support of claim 1, claim 11 is patentable over the cited combination of Sinander and Duvillier.

Independent claims 17 and 31 include recitals similar to claim 1. Therefore, for at least reasoning similar to that provided in support of claim 1, claims 17 and 31 are patentable over the cited combination of Sinander and Duvillier.

Claim 26 depends from claim 17. Claim 40 depends from claim 31. For at least reasoning similar to that provided in support of claims 17 and 31, claims 26 and 40 are patentable over the cited combination of Sinander and Duvillier.

For the reasons set forth above, the rejection of claims 11, 26 and 40 as unpatentable over Sinander in view of Duvillier is overcome. Applicants respectfully request that the rejection of claims 11, 26 and 40 be reconsidered and withdrawn.

Claims 16, 30 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinander in view of U.S. Publication No. 2002/0073089 to Schwartz et al., hereinafter "Schwartz". Applicants respectfully traverse this rejection.

As discussed above in the discussions of independent claims 1, 17 and 31, Sinander fails to disclose or suggest the elements of any of claims 1, 17 and 31.



Schwartz discloses a database management system having an Internet web browser front end that is accessible from a system user's Internet web browser at a predetermined Internet web site (par. 18). A user can navigate through a database by pointing and clicking a system input device, such as a mouse, in conjunction with a displayed HTML system navigation form (par. 19).

Neither Sinander nor Schwartz disclose a method for supporting versioning of "data items" as provided in claim 1. Both Sinander and Schwartz fail to disclose a method for supporting versioning of data including storing a most recent version of the data item in a first table and storing a version other than the most recent version in a second table. Thus, Sinander and Schwartz, whether considered independently or in combination with one another, fail to disclose all of the elements of claim 1. Therefore, claim 1 is patentable over the cited combination of Sinander and Schwartz.

Claim 16 depends from claim 1. For at least reasoning similar to that provided in support of claim 1, claim 16 is patentable over the cited combination of Sinander and Schwartz.

Independent claims 17 and 31 include recitals similar to claim 1. Therefore, for at least reasoning similar to that provided in support of claim 1, claims 17 and 31 are patentable over the cited combination of Sinander and Schwartz.

Claim 30 depends from claim 17. Claim 43 depends from claim 31. For at least reasoning similar to that provided in support of claims 17 and 31, claims 30 and 43 are patentable over the cited combination of Sinander and Schwartz.

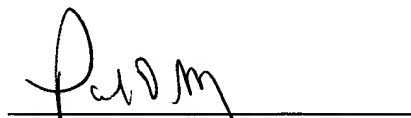
For the reasons set forth above, the rejection of claims 16, 30 and 43 as unpatentable over Sinander in view of Schwartz is overcome. Applicants respectfully request that the rejection of claims 16, 30 and 43 be reconsidered and withdrawn.

An indication of the allowability of all pending claims by issuance of a Notice of

Allowability is earnestly solicited.

Respectfully submitted,

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